Catalogue of American Amphibians and Reptiles.

Wake, M.H. 1998. *Dermophis oaxacae*.

Dermophis oaxacae (Mertens)

Gymnopis multiplicata oaxacae Mertens 1930:153. Type locality, "Cafetal Concordia, 600 m Höhe, (zwischen Puerto Angel und Salina Cruz), Staat Oaxaca, Mexiko." Holotype, Natur-Museum Senckenberg (SMF) 22120, adult, sex not noted (most caecilians cannot be sexed using external characters), collected 30 December 1927, by Dr. K. Lafrentz (examined by author).

Dermophis multiplicatus oaxacae: Alvarez and Martin 1967:1.

Dermophis oaxacae: Taylor 1968:494. First use of present combination.

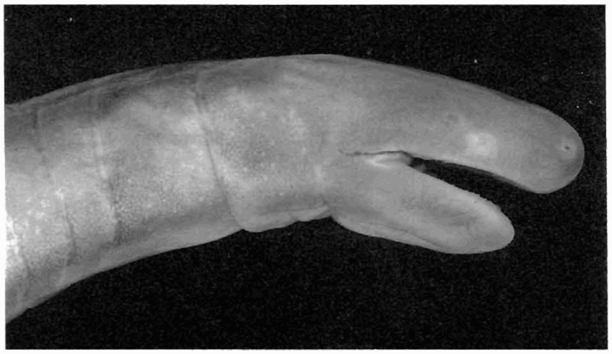


Figure. Small adult *Dermophis oaxacae* (KUMNH 95418) from Coyuco, Guerrero, México. Head length = 10 mm.

• **CONTENT.** No subspecies are recognized.

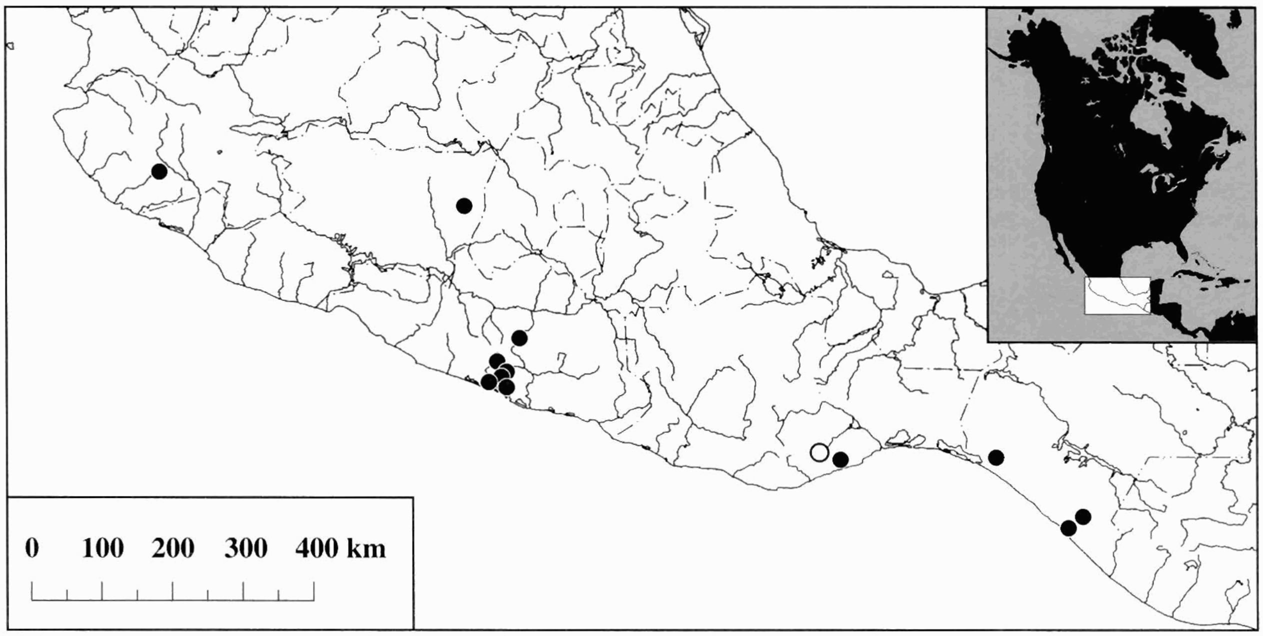
• **DEFINITION.** Adult *Dermophis oaxacae* are medium-sized (TL to 454 mm), somewhat robust caecilians with relatively large heads, subterminal mouths, eyes visible under the skin, and without splenial teeth (features that characterize the genus). Primary and secondary annular counts are high and nearly equal, suggesting that the species may be basal in the genus (more derived caecilians are characterized by reduction to loss of secondary annuli; several species of *Dermophis* have reduced numbers of secondaries). The species is viviparous (USNM 115058 is a female with four well-developed oviductal fetuses).

Coloration in life is blue-black; ethanol-preserved specimens are brown-violet, with the dorsum darker than the venter (see the type description). Taylor (1968) described the color of a preserved specimen, noting that it was "generally brownish, growing somewhat violet-brown posteriorly...Ventrally the color is very light, somewhat olivebrown ... the primaries and secondaries are darker on the anterior part of the annulus, lighter posteriorly ... the vent area is whitish and there are vague lighter areas at tentacles and nostrils."

• **DIAGNOSIS.** *Dermophis oaxacae* resembles *D. mexicanus*, with which it is sympatric, but is distinguished from the latter by having higher numbers of primary annuli (119–135 vs. 99–112) and secondary annuli (107–133 vs. 51–79); the number of secondary annuli is 80–98% that of primary annuli in *D. oaxacae*, in contrast to 44–71% in *D. mexicanus*. The tentacle in *D. oaxacae* is somewhat closer to the eye than the nostril when compared with *D. mexicanus* (but these measurements apparently vary with age). The species is somewhat smaller than *D. mexicanus*, reaching a maximum reported total length of 454 mm, in contrast to the 600 mm of *D. mexicanus*.

• **DESCRIPTIONS.** Lafrentz (1928) described collecting the type specimen, and included a photograph of it. Mertens (1930) formally described the species in a brief account of the type specimen and four paratypes. Dunn (1942) summarized information about the visibility of the eye, primary and secondary annular counts, lengths, and other pertinent data. He retained it in the genus *Gymnopis*, which then encompassed species now placed in the genus *Dermophis*. Taylor (1968) presented a much more detailed description and analysis of the species.

• **ILLUSTRATIONS**. Lafrentz (1928) included a photograph in a short description of collecting the type specimen; the photo



Map. Distribution of *Dermophis oaxacae*. The circle marks the type locality, other localities are indicated by dots.

was reprinted by Mertens (1930) in his description of the species. Taylor (1968) provided line drawings of dorsal, ventral, and lateral views of the head, of the tail, and of the interior of the upper and lower jaws; photographs of two different whole specimens dorsally and ventrally, and the dorsum and venter of the head and tail of one preserved animal were also included.

• DISTRIBUTION. *Dermophis oaxacae* is endemic to México, occurring in Jalisco, Michoacán, Guerrero, Oaxaca, and Chiapas (Alvarez and Martin 1967, Casas-Andreu et al. 1996, Dunn 1942, Erwin 1973, Lafrentz 1928, Mertens 1930, Savage and Wake 1972, Smith and Taylor 1948, Taylor 1938, Taylor and Smith 1945). Habitats range from sea level to 2100 m, the latter in Michoacán. Animals have been found primarily associated with cultivated (agricultural) areas once dominated by tropical deciduous forest, tropical scrub, and tropical evergreen forest, but also in those habitats and in pine-oak forest. In Oaxaca, the species occurs in the lowlands of the Sierra Madre del Sur and the Planicie Costera del Pacifico (Casas-Andreu et al. 1996), so vegetation is of low stature and is xerophyllic. Lafrentz (1928) reported that the type specimen was collected from the "dungheap of the mule stable," and that the common name is "metlapil."

• FOSSIL RECORD. None.

• PERTINENT LITERATURE. Dunn (1942) discussed the then-known specimens of the taxon, and included them in *Gymnopis multiplicata oaxacae*, because he did not recognize the genus *Dermophis*. Curiously, Smith and Taylor (1948) retained that taxonomic designation, though they recognized *Dermophis* and listed the characters that distinguish it from *Gymnopis* (characters clearly present in *oaxacae*). Taylor (1968) stated that Dunn had "brought together a heterogeneous group of animals whose relationships are in some cases not close. Seemingly he has disregarded a variety of characters that would separate them into a more meaningful grouping." Taylor (1968) recognized several species in the genus *Dermophis*, including *D. oaxacae*, and presented data for several specimens in that taxon. Savage and Wake (1972) discussed the features of *D. oaxacae* and the distribution of the species in the context of their analysis of geographic variation and systematics of *Dermophis* and *Gymnopis*. They suggested that the ancestral stock of *Dermophis* probably crossed the Isthmus of Tehuantepec twice, the first invasion leading to the allopatric speciation of *D. oaxacae*.

• REMARKS. Little is known of the natural history of *Dermophis oaxacae*. Its dietary habits and other aspects of its ecology and life history are inferred to be similar to those of the closely related *D. mexicanus* (see Wake 1980, 1983). The species is known from only approximately 30 specimens, and apparently has not been collected anywhere in México since 1972. An effort must be made to locate any remaining populations and then to establish a monitoring and maintenance program.

• ETYMOLOGY. The species is named for the Mexican state, Oaxaca, in which the type specimen was collected.

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